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Energy Management within Canadian Foodservice and Hospitality Education Programs

A RESEARCH REPORT

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A RESEARCH REPORT

A Survey of the Curricula of Canadian Community Colleges and Universities to Determine the Energy Management Components within the Foodservice and Hospitality Programs

Sponsored by the
Energy Conservation and Oil Substitution Branch
Energy, Mines and Resources Canada

Prepared by the
Office of Industrial Research
Department of Mechanical Engineering
University of Manitoba

June 1984

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The Buildings Energy Technology Transfer Program (BETT) of EMR has been created to assist building owners, users and practitioners active in the design, construction and operation of buildings in identifying technical obstacles to energy conservation. Through a nationwide network of research agencies and private sector consultants, BETT carries out research and development projects and provides the audiences mentioned above with technical reports, how-to manuals, training manuals, audio-visual aids and data bases to help them overcome these obstacles.

For further information on the BETT program please contact:

The Buildings Energy Technology
Transfer Program
Energy, Mines and Resources Canada
580 Booth St.
Ottawa, Ontario
K1A 0E4

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ABSTRACT

Key Words:
Restaurant/Energy/Foodservice/Hospitality/
Universities/Community Colleges

This study identified 38 Canadian community colleges and universities that offer programs in the foodservice and hospitality technology. A combined mail and telephone survey was conducted to determine the extent that topics in the energy management field have penetrated the curricula at these institutions.

The results of the study indicate that none of the institutions presently have a course within their curricula that concentrates specifically on energy management in the foodservice-hospitality industry. However, several administrators-instructors indicated that such topics as electrical demand cost control as well as energy conserving food processes and equipment were discussed within present programs. Overall, there was an indication that the emphasis on the energy management technology within the course material was increasing and that the need for related teaching aids, resource material and external technical support as a stimuli was required.

RESUME

Mots clés :
Restaurant, énergie, restauration de collectivité, accueil, universités, collèges communautaires.

Trente-huit universités et collèges communautaires canadiens offrent un programme d'études en techniques d'accueil et de restauration de collectivité. Se servant à la fois du téléphone et de la poste, on a mené un sondage visant à déterminer dans quelle mesure les questions relatives à la gestion de l'énergie font partie du programme offert par ces établissements.

Il ressort de ce sondage qu'aucun d'eux n'offre de cours qui porte expressément sur la gestion de l'énergie dans l'industrie de la restauration et de l'accueil. Toutefois, plusieurs administrateurs chargé de cours ont affirmé qu'on traitait déjà, dans le cadre des cours actuels, de questions comme la commande de charge et les procédés, appareils et ustensiles de préparation des aliments qui permettent d'économiser l'énergie. Dans l'ensemble, les programmes accordent de plus en plus d'importance aux techniques de gestion de l'énergie et on a besoin de matérial didactique, de documentation de référence et d'un appui technique extérieur pour motiver les étudiants.

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1.0 INTRODUCTION

In January 1983, The University of Manitoba (as lead agency for the BETT Program for Restaurants) was invited to participate in a forum on energy management by the students enrolled in The Hotel and Restaurant Administration program at Red River Community College in Winnipeg. The positive response to the topics discussed confirmed that these students were a very important audience within the Restaurant Sector Energy Technology Transfer Program (see Figure 1). Although the opportunity for the BETT Program to interface with community college and university programs had been discussed by the BETT Program Coordinating Committee, the "real" importance of this channel to the restaurant program had not been realized fully until this experience.

The primary goal of the Buildings Energy Technology Transfer Program for Restaurants is to transfer energy management technology through various channels to the end user, the owner-operator of a restaurant facility. The channel of information exchange utilizing Canadian community college and universities was anticipated to be practical and effective. Therefore, a preliminary investigation to inventory those institutions providing restaurant specific courses and to determine the degree that energy management topics had penetrated the curricula was required. This preliminary survey was needed to provide a better understanding of the Canadian community college and university systems and how best to expedite the energy management technology transfer through these channels.

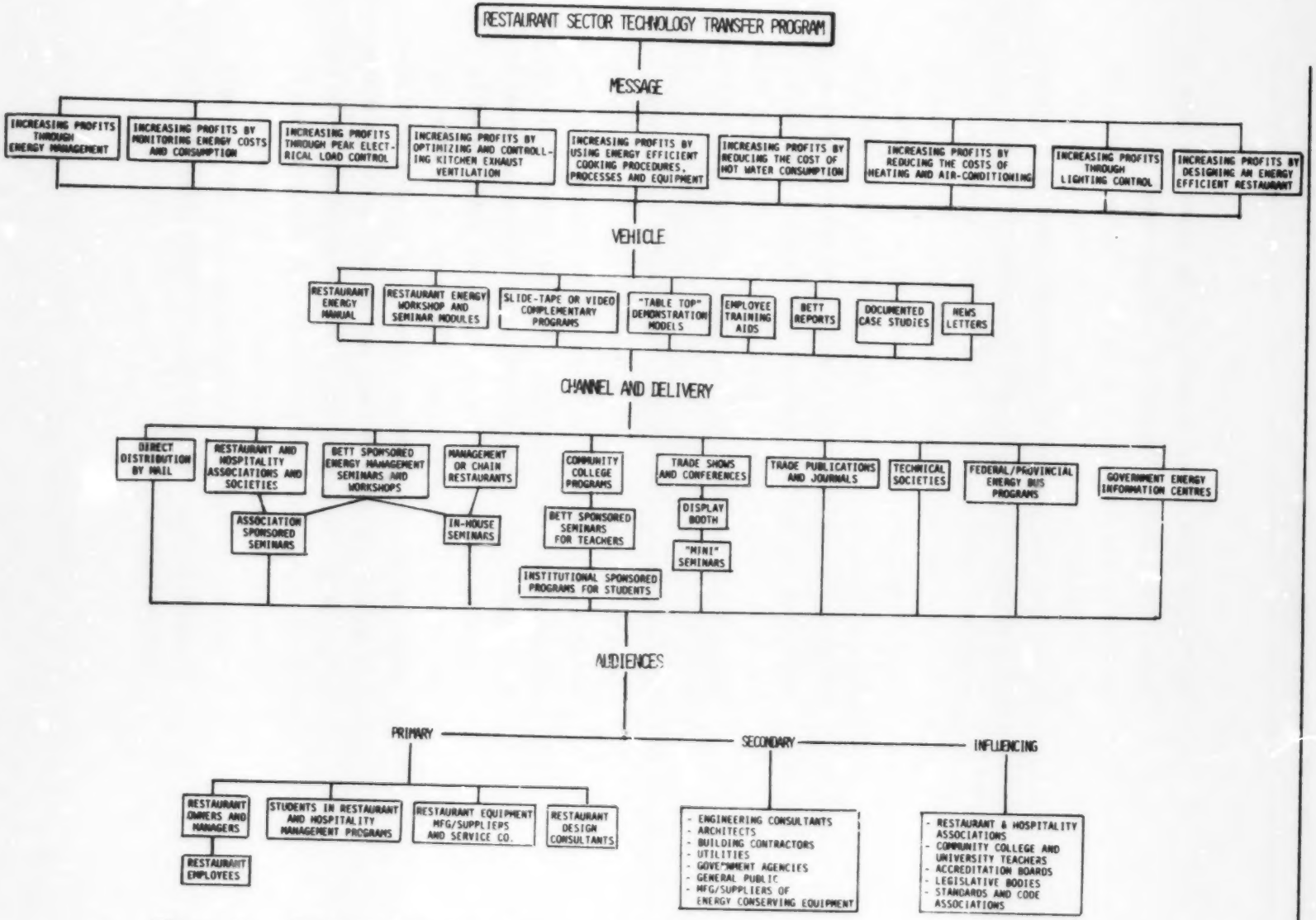
RESTAURANT SECTOR TECHNOLOGY TRANSFER PROGRAM
MESSAGE
INCREASING PROFITS THROUGH ENERGY MANAGEMENT
INCREASING PROFITS BY MONITORING ENERGY COSTS AND CONSUMPTION
INCREASING PROFITS THROUGH PEAK ELECTRICAL LOAD CONTROL
INCREASING PROFITS BY OPTIMIZING AND CONTROLLING KITCHEN EXHAUST VENTILATION
INCREASING PROFITS BY USING ENERGY EFFICIENT COOKING PROCEDURES, PROCESSES AND EQUIPMENT
INCREASING PROFITS BY REDUCING THE COST OF HOT WATER CONSUMPTION
INCREASING PROFITS BY REDUCING THE COSTS OF HEATING AND AIR-CONDITIONING
INCREASING PROFITS THROUGH LIGHTING CONTROL
INCREASING PROFITS BY DESIGNING AN ENERGY EFFICIENT RESTAURANT
VEHICLE
RESTAURANT ENERGY MANUAL
RESTAURANT ENERGY WORKSHOP AND SEMINAR MODULES
SLIDE-TAPE OR VIDEO COMPLEMENTARY PROGRAMS
"TABLE TOP" DEMONSTRATION MODELS
EMPLOYEE TRAINING AIDS
BETT REPORTS
DOCUMENTED CASE STUDIES
NEWS LETTERS
CHANNEL AND DELIVERY
DIRECT DISTRIBUTION BY MAIL
RESTAURANT AND HOSPITALITY ASSOCIATIONS AND SOCIETIES
ASSOCIATION SPONSORED SEMINARS
BETT SPONSORED ENERGY MANAGEMENT SEMINARS AND WORKSHOPS
MANAGEMENT OR CHAIN RESTAURANTS
IN-HOUSE SEMINARS
COMMUNITY COLLEGE PROGRAMS
BETT SPONSORED SEMINARS FOR TEACHERS
INSTITUTIONAL SPONSORED PROGRAMS FOR STUDENTS
TRADE SHOWS AND CONFERENCES
DISPLAY BOOTH
"MINI" SEMINARS
TRADE PUBLICATIONS AND JOURNALS
TECHNICAL SOCIETIES
FEDERAL/PROVINCIAL ENERGY BUS PROGRAMS
GOVERNMENT ENERGY INFORMATION CENTRES
AUDIENCES
PRIMARY
SECONDARY
INFLUENCING
RESTAURANT OWNERS AND MANAGERS
RESTAURANT EMPLOYEES
STUDENTS IN RESTAURANT AND HOSPITALITY MANAGEMENT PROGRAMS
RESTAURANT EQUIPMENT MFG/SUPPLIERS AND SERVICE CO.
RESTAURANT DESIGN CONSULTANTS
- ENGINEERING CONSULTANTS
- ARCHITECTS
- BUILDING CONTRACTORS
- UTILITIES
- GOVE"SMENT AGENCIES
- GENERAL PUBLIC
- MFG/SUPPLIERS OF ENERGY CONSERVING EQUIPMENT
- RESTAURANT & HOSPITALITY ASSOCIATIONS
- COMMUNITY COLLEGE AND UNIVERSITY TEACHERS
- ACCREDITATION BOARDS
- LEGISLATIVE BODIES
- STANDARDS AND CODE ASSOCIATIONS

Figure 1 Restaurant Energy Management Technology Transfer Program Flow Chart

The objectives of this study were:

(1) To inventory Canadian community colleges and universities that offer courses of instruction related to the foodservice and hospitality industry.

(2) To contact the administrators-instructors at these institutions in order to identify the energy management components within the course material.

(3) To establish the emphasis and priority placed on introducing or expanding the energy management instruction within the institution's foodservice and hospitality curriculum.

(4) To evaluate the role of the BETT Program for Restaurants in providing the institutions with technical resources and educational material related to restaurant energy management.

A list of Canadian community colleges and universities that offered foodservice and hospitality related courses was compiled. A covering letter and questionnaire (Appendix A) was sent to the contact person (administrator-instructor) identified by the references (Section 6.0). The questionnaire allowed the respondent to indicate energy management components within the present and future curricula and requested opinions on the type of lecture material best suited for their presentations.

The questionnaires that were returned were reviewed and where necessary, telephone contacts were made to obtain further information. The completed questionnaires were reviewed and specific data were extracted and summarized. The college and university contacts and their addresses were inventoried and listed in alphabetical order. If there was no reply or the administrator-instructor indicated that an energy management component was not included in the curriculum, it was indicated in the inventory, Table B1, Appendix B. As well, the most recent calendars issued by the institutions were reviewed and the specified course descriptions were reproduced for input into Table B1. The table was developed to serve the purpose of data reduction and summarization as well as to provide the basis for documentation of future technology transfer programs to the institutions. For example, interested contacts were mailed a copy of the restaurant energy management manual entitled "Profit By Conserving Energy in Your Restaurant" and this technology transfer is documented in Table B1.

The summary of the results are shown in Appendix B. The table shows the institution, name and number of the course as well as a brief description. Also, the respondents'comments from the questionnaire are included if they are relevant to the study objectives.

Of the 38 Canadian community colleges and universities that were sent questionnaires, 20 replied. The non-responding administrator-instructors were telephoned to request the information.

The current list of institutions and contacts offering foodservice and hospitality programs are shown in Appendix B, Table B1. Where no response was received or the information was not relevant, the institution name, address and contact were entered to maintain a list for future input.

An evaluation of the summarized data indicated that 20 of the schools presently offer 27 courses with energy management components as part of their curriculum. It should be noted that none of the institutions offered a course that contained strictly energy management instruction. However, the development and consideration of courses containing increased instruction in energy management was indicated as a high priority by eight administrators-instructors. Eight administrators-instructors indicated that they reviewed the topic of electrical demand cost control while 12 others said that energy conservation was discussed within courses that gave instruction in selection of equipment and food cooking processes.

In general the respondents were aware of the emphasis that should be placed on energy management within their curriculum. However, the overall indications were that the implementation of more structured and specific instruction on energy management required further investigation by the institutions.

Several administrators-instructors suggested that contact should be made with other bodies associated with the restaurant industry to improve the technology transfer. Of particular importance are:

1) The Ontario Hostelry Institute and the Canadian Hospitality Institute (INDCORE)

2) The core curriculum of the Ministry of Colleges and Universities of the Province of Ontario.

3) The Canadian Association of Dieticians, and specifically the Auxilliary Education Committee of the Ontario Dietetic Association, which approves all Food Service Supervisor programs in Ontario.

The majority of administrators-instructors felt that further information in the form of energy management seminars with a slide-tape format would benefit their respective courses.

From the review of the questionnaires there was an awareness for the need to expand the energy management components within the curricula of the institutions surveyed. Specifically the information received from this survey suggested that the workshop-seminar package presently being developed by the BETT Program Restaurant Group would partially fulfill the requirements indicated by the responding administrators-instructors. The workshop-seminar packages are in the form of modules on specific topics of interest to the restaurant owners-operators.

Module (1) Introduction
Module (2) Increasing Profits by Monitoring Energy Costs and Consumption
Module (3) Increasing Profits Through Peak Electrical Load Control
Module (4) Increasing Profits by Optimizing and Controlling Kitchen Exhaust Ventilation.

There is an excellent opportunity to use the Canadian community college and university systems as a channel for restaurant energy management technology transfer. As well, the suggestion by some of the respondents to use the accreditation boards and restaurant associations as influencing audiences* will be actively pursued by the restaurant sector personnel. The BETT Program for Restaurants should continue to develop materials, teaching aids and strategies to increase the ability of the Canadian community colleges and universities to transfer the energy management technology to the students that would soon manage a Canadian restaurant or other food service facility.

* see Figure 1, page 2.

1. Anon., Directory of Courses Tourism-Hospitality Recreation, Ottawa, Ontario, Canadian Government Offices of Tourism, 1980-1982.

2. Anon., College and University Programs in Canada Ottawa, Ontario, Employment and Immigration Canada, 1981-82.

APPENDIX A

Canadian community college and universities questionnaire and covering letter.

May 4, 1983

Curriculum Coordinator
Community Colleges

Dear Sir or Madam:

Thank you for the response to our survey regarding energy management components within your course curriculum.

We have compiled the data and will be producing a final report shortly.

We have enclosed a recent publication entitled "Profits by Con$serving Energy in your Restaurant" which we hope you find interesting. If more copies are required please feel free to contact us.

Thank you again for your time and input into our work.

Yours truly,

TED LIGHTEY, P. ENG.
RESEARCH ASSOCIATE

TL/pld

encl.

QUESTIONNAIRE

NOTE: We have used the Canadian Government Office of Tourism "Directory of Courses - Tourism Hospitality Recreation - 1980-82" to prepare this survey. We also have most of the calendars on file. Please refer to courses by course name.

We expect to be telephoning for further information or clarification. Who is a suitable contact in your department?

NAME:

ADDRESS:

PHONE:

OFFICE HOURS:

Please feel free to use the back of each page if more space is required.

1.

Do your courses teach energy management? Please list courses that do.

Do you have courses specifically on energy? What course materials have you used in these courses?

Do you cover conservation as a means of cost control?

More specifically do you cover:

Reducing energy usage (e.g. lighting, ventilation, heating)?

Rescheduling loads to reduce demand charges?

Selection of equipment for low operating costs?

Are you developing new courses or adding a component of energy conservation to existing courses? Which ones?

Do you have reliable information on energy consumption and conservation?

Energy costs are small compared to other operating costs. Do you feel the potential for savings in energy costs are significant in comparison to other areas?

We are developing seminar packages for presentation to restaurant operators. Would you find these useful?

Would the same information be more useful in the form of a slide and tape program?

Would you prefer handouts of the same information to be used as course material?

Can you suggest any other ways in which we could usefully present this information or support your program?

_____

_____

_____

_____

_____

_____

_____

_____

_____

If you wish clarification, please feel free to call:

TED LIGHTLY 1-204-261-0394

DON FISHER 1-204-474-9943

or THE OFFICE OF INDUSTRIAL RESEARCH - 1-204-474-9463

TL/pld

1983 03 15

APPENDIX B

Inventory of Educational Institutions and Curricula.

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
1	Algonquin College 1385 Woodroffe Ave. Ottawa, Ontario K2G 1V8 Mr. S.R. Wieczorek Hospitality Administration and Food Services (613) 725-7535	Hospitality Management - Equipment and Facilities 21-122	Provide the student with the basic knowledge of physical facets of the hospitality industry, to utilize the equipment, facilities, maintenance and planning. TEXT: The Management of Maintenance and Engineering Systems in The Hospitality Industry. Frank Borsenil, Wyley & Sons.	- M - teaches electrical demand cost control and energy efficient equipment selection - "adding a component on energy conservation"
2	B.C. Institute of Technology 3700 Willingdon Ave. Burnaby, B.C. V5G 3H2 Mr. M.M. Coltman Hotel, Motel & Food Service Management (604) 434-5734	none		- M

M - Restaurant Manual sent to contact

" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
3	Camosun College 1950 Lansdown Rd. Victoria, B.C. V8P 5J2 Mr. Albert van Citters Hotel and Restaurant Administration (604) 592-1281	none		- M
4a	Canadore College P.O. Box 5001 North Bay, Ontario P1B 8K9 Ms. Joan Letcher Food Service Supervision (705) 474-7600	Food Service Equipment Institutional Management	No further description in calendar No further description in calendar	- M - Instruction includes electrical demand cost control and energy efficient equipment selection.
4b	Canadore College P.O. Box 5001 North Bay, Ontario P1B 8K9 Mr. Neil E. Cornthwaite Hotel Resort and Restaurant Management			- M - No response to questionnaire

M - Restaurant Manual sent to contact

" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
5a	Centennial College 651 Warden Ave. Scarborough, Ontario M1L 3Z6 B. A. Sells Food Service Supervisor (416) 694-3241 (421)			- M - no response
5b	Centennial College 651 Warden Ave. Scarborough, Ontario M1L 3Z6 Mr. E. Papp Hospitality Administration and Services (Restaurant Administration) and Hotel Administration (416) 439-7180	none		- M

M - Restaurant Manual sent to contact

" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
6	Centralia College Huron Park, Ont. NOM 1Y0 Ms. Deborah Campbell Food Service Management (416) 228-6691	Home Management	Covers a study of the goals and values of the individual and how these are integrated with management in daily living.	- M - "adding more material on energy management"
		Survival Mechanics	Deals with maintenance of mechanical and electrical equipment including plumbing, refrigeration, lighting, laundry equipment and appliances.	
7	Conestoga College 435 King St. North Waterloo, Ontario Ms. Elizabeth Esenbergs Food & Beverage Management (519) 885-0300	none		- M

M - Restaurant Manual sent to contact

" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
8	Confederation College Box 398 Station F Thunder Bay, Ontario Mr. Angelo D. Bottos Hotel Management (807) 475-6163	Hospitality Architecture	No further description in calendar	- M - developing course material on electrical demand cost control and energy efficient equipment selection
		Hospitality Equipment Layout	No further description in calendar	
9	Dartmouth Regional Vocational School 21 Woodlawn Road Dartmouth, N.S. B2W 2R7 Mrs. H. Rae Marlborough Hotel, Motel Restaurant Management (902) 434-2020	Housekeeping and Maintenance	Secondary school- no calendar existing	- M - developing course material on energy management
10	Ecole provinciale d'Hôtellerie Collège communautaire du N.-B. Campus d'Edmundston C.P.70 Edmundston, N.-B. E3V 3K7 M. Phil Bélanger	none		- M "Subjects discussed: repair and maintenance, heat, light & power"

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
11	Fanshawe College P.O. Box 4005 Terminal C London, Ontario N5W 5H1 Mr. B.M. Bree Hotel & Restaurant Management (519) 452-4455	Maintenance and Engineering	No further description in calendar	- M
12	George Brown College P.O. Box 1015 Station B Toronto, Ontario M5T 2T9 Mr. Brian Cooper or Ms. Dorothy Ellis Food and Beverage; Hotel Management, and Fast Food Supervisor (416) 967-1212 (4306)	Food Facilities Engineering	Students are made aware of and demonstrate energy conservation techniques in design and layout, equipment purchase and in routine maintenance of equipment and facilities	- M - teaches "some" energy efficient equipment selection
13a	Georgian College 1 Georgian Drive Barrie, Ontario L4M 3X9 Resort and Hotel Operation (705) 728-1951	Resort and Equipment Maintenance	This one semester course is offered as part of the Resort and Hotel Operation Program and has a strong energy management component	- M

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
13b	Georgian College 1 Georgian Drive Barrie, Ontario L4M 3X9 Mr. Don Ford School of Tourism	none		- M
14	Holland College Charlottetown Centre Weymouth St. Charlottetown, P.E.I. C1A 4Z1 Mr. Joseph W. Lawrence Hotel/Restaurant/ Institutions Operations (902) 892-4191 (165)	Hospitality Service	No further description in calendar	- M
15	Humber College 205 Humber College Blvd Rexdale, Ontario M9W 5L7 Mr. Igor Sokur Hotel and Restaurant Management	none		- M
16	John Abbot College Box 2000 Ste-Anne-de-Bellevue, Que. H9X 3L9 Ms. Shirley J. Wood Food Service Supervisor (514) 457-6610			- M - No longer offers courses in Food Service & Hospitality

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
17	Kelsey Institute of Applied Arts & Sciences P.O. Box 1520 SASKATOON, Sask. S7K 3R5 Mr. P.B. Enright Hotel & Restaurant Administration and Dietary Services Administration (306) 664-6397	Maintenance ME-4002	A study of maintenance procedures for equipment and facilities in a food-service outlet. It includes electric power & water; plumbing, HVAC, refrigeration; and fire regulations	- M - "developing a maintenance course with significant energy management content"
		Hotel Planning and Layout PL-4003	A basic study of commercial buildings, their design, layout and specifications as related to energy usage in the hospitality industry. Students will be introduced to the various codes and requirements involved with in the planning and designing of hotels.	
18	LaSalle College 2015 Drummond St. Montreal, Quebec H3G 1W7 Mr. Michael Oliver-Lloyd Director, Tourism and Hotel Management Programs (514) 281-1919	none		- M

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" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
19	Loyalist College P.O. Box 4200 Belleville, Ont. Mr. Fred Goerke Hotel & Restaurant Management (613) 962-9501	none		- M
20	Malaspina College 900 - 5th Street Nanaimo, B.C. V9R 5S5 Mr. Bert Kampers Hotel & Restaurant Management (604) 753-3245	Hotel Management 276T	No further description in calendar	- M
21	Mohawk College Fennell Campus P.O. Box 2034 Hamilton, Ontario Mrs. Lillian Gladstone	none		- M "We use the Hilton International Energy Management Manual for information"
22	New Brunswick Community College, St. Andrew Campus 416 York Fredricton, N.B. E3B 3P7 Clarence Sabean	none		- M "Subjects discussed: repair and maintenance, heat, light & power"

M - Restaurant Manual sent to contact

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TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
23	Niagara College Rainbow Hotel Centre 5755 River Road Niagara Falls, Ont. L2G 3K9 Mr. Neil McGregor Hotel & Restaurant Administration	Plant Engineering & Operations HOSP 309	No further description in calendar	- M - "teach equipment selection"
24	Northern College Hwy 101 East P.O. Box 2002 South Porcupine, Ont. P0N 1H0 Mr. Gravel Hospitality Administration and Food Services			- M - no longer offer courses
25	Northern Alberta Institute of Technology 11762-106 Street Edmonton, Alberta T5G 2R1 Mr. R.D. Gray Hospitality Program (403) 471-7400	none		

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
26	Red River Community College 2055 Notre Dame Ave. Winnipeg, Manitoba R3H 0J9 Mr. Otto Kirzinger Hotel & Restaurant Administration (204) 632-2368	Building & Engineering B09H423	No further description in calendar	- M - Presented seminar in January 1983 to the students of Hotel & Restaurant Administration. ("instruction in equipment selection")
27	Ryerson Polytechnical Institute 50 Gould Street Toronto, Ontario M5B 1E8 Mr. R. Kautzky Hotel Restaurant & Resort Management (416) 595-5204	Hospitality Engineering and Design HRD 203	A study of the areas relative to preliminary design for hospitality projects. The culmination of this course will be the preliminary planning for a food service establishment.	- M - Instruction includes electrical demand cost control and energy efficient equipment and food process control
28	St. Clair College 2000 Talbot Road West Windsor, Ontario N9A 6S4 Mr. Glen Van Blommestein Food Service Management (519) 966-1656 (393)	none		- M

M - Restaurant Manual sent to contact
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INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
29	Sheridan College Laughlin Road P.O. Box 7500 Brampton, Ontario L6V 1G6 Mr. Fred Scholl Hotel & Restaurant Management (416) 459-7533	none		- M - "teach energy efficient equipment selection"
30	Southern Alberta Institute of Technology 1301 - 16th Ave. N.W. Calgary, Alberta T2M 0L4 Mr. A.S. Heazell Hotel & Restaurant Administration and Food Service Management (403) 284-8485	Physical Facilities PHY 201	An appreciation of the operation and maintenance of building and equipment as would be found in hotels and clubs.	- M - "Very little energy management instruction"

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
31 a	The Sault College P.O. Box 60 Sault Ste. Marie, Ontario P6A 5L3 Mr. Keith Maidens Hotel & Restaurant Management (705) 949-2050 (332)	Food and Beverage Cost Control FDS-213-4	Reviews and discusses various systems currently in use.	- M - instruction includes electrical demand cost control and energy efficient equipment selection
		Kitchen Planning FDS-212-6	The study of organization and administration of kitchen operations. Kitchen planning and layout.	
31 b	The Sault College P.O. Box 60 Sault Ste. Marie, Ontario P6A 5L3 Mr. A.G. Simpson Hospitality Administration and Food Service (705) 949-2050			- no response
32 a	Institut de Tourisme et d'Hotellerie du Quebec 401 de Rigaud Montreal, Quebec H2L 4P3 Constant Laviolette Techniques de Gestion des services alimentaires (514) 873-7342	Amangement de Service Almentaire	No further description in calendar	- M

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
32 b	Institut de Tourisme et d'Hotellerie du Quebec 401 de Rigaud Montreal, Quebec Gerant d'Hotellerie and Gestion de Quisine (514) 873-7342	Amenagement Hotelier	No further description in calendar	- M
33	College of Trades and Technology P.O. Box 1693 TRC Prince Philip Dr. St. John's, Newfoundland A1C 5P7 Mrs. Verah News Institute of Food Administration (709) 364-9000	Food Service	No further description in calendar	- M - "no energy related courses. Cooking is all electric in Newfoundland -- we emphasize low energy cooking."

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
34	University College of Cape Breton P.O. Box 5300 Sydney, Nova Scotia B1P 6L2 Ms. Gail Muir (902) 539-5300	Food and Beverage Management 75-621 & 75-622	An introductory course dealing with management controls necessary to run a profitable operation. TEXT: Controlling and Analyzing Costs in a Food Service Operation Keiser & Kallio	- M - "Energy costs are an area that is not looked at enough."
		Physical Plant 75-695	Deals with preventing major repair problems by preventive maintenance.	
35	Concordia University Centre for Continuing Education 1455 de Maisonneuve Blvd W. Montreal, Qubec H3G 1M8 Ms. Donna Secord Hospitality Management (514) 879-8436	Physical Plant Management	Not listed in calendar. Short seminar. Non-credit.	- M - "redeveloping this course with a energy management component"

M - Restaurant Manual sent to contact

" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
36	University of Guelph Guelph, Ontario N1G 2W1 Prof. Ted Fletcher School of Hotel & Food Administration Food Service Management Major (519) 824-4120 (8710)	Physical Plant Management 54.403	No further description in calendar	- M - Suggested that "A good selection of workshop problems to illustrate potential savings from various alternatives would be helpful in involving students in energy management. Some live examples of 'before' and 'after' situation would help sell energy management."
37	Macdonald College of McGill University Montreal, Quebec H0A 1C0 D. A. Raymond Food Administration (Major) and Hospitality - Food Management (514) 457-2000 (221)	none		- M

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS
38	Mount Saint Vincent University 166 Bedford Hwy Halifax, Nova Scotia B3M 2J6 Dr. Margaret Bateman-Ellison Food Service Administration (902) 443-4450 (378)	none		- M
39	Vancouver Community College Langara Campus 100 West 49 Ave. Vancouver, B.C. V5Y 2Z6 Ms. Suzanne Stevens Food Services Technican Program (604) 324-5511	Food Service Systems Planning, Design & Interior Decorating BUS 294	The course material will give an appreciation of good design by way of blueprint reading, contracts, principles of design selection of equipment and furnishings.	- M - "We are adding course material on energy management in the present course."

M - Restaurant Manual sent to contact
" " Indicates direct quote by respondent from questionnaire

TABLE B1 - INSTITUTION AND COURSE INVENTORY: ENERGY MANAGEMENT COMPONENTS, 1982 CURRICULA

INSTITUTION NUMBER	INSTITUTION NAME AND CONTACT	COURSE WITH ENERGY MANAGEMENT COMPONENT	CALENDAR DESCRIPTION SUMMARY	COMMENTS

Totals (1983 09 09)

- 39 colleges and university
- 43 contacts of administrators - instructors
- 27 courses identified with energy management components